What is claimed is:

1. A communication system having a telephone network that delivers call waiting signaling upon detecting an incoming call, the communication system comprising:

a remote modem that has a hold mode;

a local modem communicatively coupled to the remote modem via shared access to the telephone network; and

the local modem, after detecting the call waiting signaling, directs the remote modem to enter the hold mode then temporarily relinquishes access to the telephone network.

2. The communication system of claim 1 wherein the local modem performs caller identification processing.

3. The communication system of claim 2 wherein caller identification information is used in the determination of whether to service incoming calls.

4. The communication system of claim 3 wherein the determination of whether to service incoming calls involves providing a user interface.

5. The communication system of claim 3 further comprising a computer coupled to the local modem, and wherein the determination of whether to service incoming calls is performed automatically by the computer.

6. The communication system of claim 1 wherein the remote modem remains in the hold mode for no longer than a predetermined interval.

7. The communication system of claim 1 wherein the local modem uses a v.42 protocol to set up a secondary channel for signaling the remote modem regarding the hold mode.

8. The communication system of claim 1 further comprising a table that stores preselect caller identification information for comparison with the caller identification information of incoming calls.

9. The communication system of claim 8 wherein the comparison is used to determine whether to service incoming calls.

10. The communication system of claim 1 wherein the remote modem attempts to maintain a network connection that involves the remote modem and the local modem by communicating with upper protocol layers while in the hold mode.

11. A communication system comprising:

a local link;

a telephony device coupled to the local link;

a remote modem having at least one associated telephone number;

a local modem that establishes a data session with the remote modem by dialing the associated telephone number; and

the local modem, after detecting a need to relinquish the local link to the telephony device, directs the remote modem to maintain the data session and temporarily relinquishes the local link to the telephony device.

12. The communication network of claim 11 wherein the local modem reestablishes the data session without redialing the associated telephone number.

13. The communication network of claim 11 wherein the detecting by the local modem of the need to relinquish the local link to the telephony device comprises detecting call waiting signaling.

14. The communication network of claim 11 wherein the detecting by the local modem of the need to relinquish the local link to the telephony device comprises detecting a user initiated request.

15. The communication network of claim 11 wherein the detecting by the local modem of the need to relinquish the local link to the telephony device comprises detecting an attention signal.

16. The communication network of claim 11 further comprising a computer coupled to the local modem, and wherein the detecting by the local modem of the need to relinquish the local link to the telephony device comprises detecting a request that is automatically generated by the computer.

17. The communication network of claim 11 wherein three-way calling services are used to support the telephony device.

18. The communication network of claim 11 wherein call waiting services are used to support the telephony device.

19. A modem coupled to a computing system and, via a telephone line, to a telephone network, the modem communicating with the computing system via a protocol stack, the modem comprising:

a processing circuit having a first mode in which communication is exchanged in an established data session and a second mode in which the established data session is temporarily placed on hold; and

the processing circuit entering the second mode in response to signals received via the telephone network and interacting with the protocol stack as if the processing circuit was operating in the first mode.

20. The modem of claim 19 wherein the data session comprises communication on a primary channel, and the signals received via the telephone network are received on a secondary channel.

21. A modem coupled to a computing system and, via a telephone line, to a telephone network, the modem sharing the telephone line with a telephony device, the modem comprising:

a processing circuit that establishes a data session by dialing a telephone number; and

the processing circuit detects a need to relinquish the telephone line to the telephony device; and

the processing circuit maintains the data session while temporarily relinquishing the local link to the telephony device; and

the processing circuit reestablishes the data session without having to redial the telephone number.

22. The modem of claim 21 wherein the detecting of the need to relinquish the telephone line to the telephony device comprises detecting call waiting signaling.

23. The modem of claim 21 wherein the detecting of the need to relinquish the telephone line to the telephony device comprises detecting a user initiated request.

24. The modem of claim 21 wherein the detecting of the need to relinquish the telephone line to the telephony device comprises detecting a request that is automatically generated by the computing system.

25. A communication system comprising:

a local telephone link;

a local modem attached to local telephone link;

a local remote modem engaged in an ongoing data session;

the local modem, after detecting a need to relinquish the local telephone link, temporarily relinquishes the local telephone link; and

the remote modem, after detecting the need to relinquish the local telephone link, attempts to maintain the data session.

26. The communication system of claim 25 wherein the remote modem detects the need through a communication from the local modem.

27. The communication system of claim 25 wherein the telephone network has a central office, and the remote modem detects the need from a communication from the central office.

28. A communication system comprising:

a local modem;

a remote modem engaged in an ongoing data session;

the local modem, after detecting a competing need, delivers a signal to the remote modem placing the remote modem on hold.

29. The communication system of claim 28 further comprising a link, and wherein the competing need comprises a need to share the link.

30. The communication system of claim 28 wherein the competing need comprises a need for rerouting.

31. The communication system of claim 28 wherein the competing need comprises a need to replace the local modem.

add B2

add F5

add C6